

MANUFACTURE OF SEMICONDUCTOR DEVICE

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Abstract

PURPOSE:To improve the adhesive properties of a layer insulating film consisting of an organic high molecular resin by forming an aluminum oxide film shaped by a solution applying agent consisting of diisobutylisobutoxyl aluminum and diethylene glycol dimethyl ether through spin coating between a semiconductor substrate and the layer insulating film.

CONSTITUTION:An silicon oxide film 2 is formed onto the surface of a semiconductor substrate 1 to which an element such as an MOS type field-effect transistor is shaped previously, and a first aluminum wiring 3 is formed onto the silicon oxide film 2 in accordance with a predetermined pattern. A solution applying agent composed of isobutylisobutoxyl aluminum and ethylene glycol dimethyl ether is spin-coated under conditions such as 4,000 revolution and 10sec in a nitrogen gas atmosphere, left as it is in air at room temperature, and thermally treated in air for 30min at 240 deg.C and a film is shaped, thus forming the aluminum oxide film 4 in thickness of approximately 200Angstrom . A layer insulating film 5 composed of a resin such as a polyimide resin is shaped onto the film 4. A semiconductor device, which consists of the layer insulating film having excellent adhesive properties with a foundation film and a low element percent defective and has high reliability, is acquired.

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